IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| In re Application of: | ) |
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| Ann M. Wollrath et al. | ) Group Art Unit: 2151 |
| | ) |
| Serial No.: 08/636,706 | ) Examiner: Sue Lao |
| | ) |
| Filed: April 23, 1996 | ) |
| | ) |
| For:  SYSTEM AND METHOD FOR | ) |
| FACILITATING DYNAMIC LOAD- | ) |
| ING OF "STUB" INFORMATION | ) |
| TO ENABLE A PROGRAM | ) |
| OPERATING IN ONE ADDRESS | ) |
| SPACE TO INVOKE PROCESS- | ) |
| ING OF A REMOTE METHOD OR | ) |
| PROCEDURE IN ANOTHER | ) |
| ADDRESS SPACE | ) |

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Technology Center 2100

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

## REQUEST FOR RECONSIDERATION

In the Office Action dated November 7, 2002, the Examiner rejected claims 1-33.

Claims 1, 4, 11, 14, 21, and 24 were rejected under 35 U.S.C. § 103(a) as being

obvious over *Hill et al.*, U.S. Patent No. 5,511,197.  Claims 31-33 were rejected under

35 U.S.C. § 103(a) as being unpatentable over Betz, "Interoperable Objects: Laying the

Foundation for Distributed-Object Computing" in view of *Hill et al.*  Claims 3, 7-10, 13,

17-20, 23, and 27-30 were rejected under 35 U.S.C. § 103(a) as being unpatentable

over *Hill et al.* in view of Birrell et al., "Network Objects."  Lastly, claims 2, 5, 6, 12, 15,

16, 22, 25, and 26 were rejected under 35 U.S.C. § 103(a) as being unpatentable over

*Hill et al.* in view of Mitchell et al., "An Overview of the Spring System." Applicants respectfully traverse these rejections.

In the Office Action, the Examiner alleged that "a stub refers to the interfaces for invoking a particular remote program/procedure/method" and therefore the stub is met by the proxy of *Hill et al.* (11/7/02 Office Action, p. 2, p. 6.) A stub as claimed includes declarations for the complete set of interfaces for the class that implements the remote method to be invoked and provides or invokes methods that facilitate accessing the remote method(s) implemented by the remote class. (Specification, p. 9, ll. 4-19.) Thus, a stub is more than just interfaces, as the Examiner alleged. Therefore, the mere fact that the proxy of *Hill et al.* may provide a set of interfaces does not mean that the *Hill et al.* proxy meets the claimed stub.

The Examiner also argued that in *Hill et al.*, the client receives a class identifier of a proxy (supposedly reading on receiving a stub from a server) and dynamically loads code to create an instance of the proxy (supposedly reading on loading said stub into an execution environment). (11/7/02 Office Action, p. 2, p. 6.) However, this interpretation is flawed because the Examiner interpreted the same claim term (stub) in at least two different ways: first as "a class identifier" and then as "code to create an instance of the proxy." Furthermore, the Examiner earlier asserted that the claim term stub is met by the "proxy" itself. Thus, the Examiner's argument seems to change the interpretation of the claim several times in an attempt to apply *Hill et al.*

The claims recite that the same thing (i.e., the stub) is received from the server and then loaded into the execution environment. *Hill et al.* teaches that one thing (i.e., a

class identifier) is received and a different thing (i.e., code to create an instance of a proxy) is loaded. Therefore, Applicants respectfully disagree with the Examiner's arguments set forth on page 6 of the Office Action.

Regarding the rejections of claims 1, 4, 11, 14, 21, and 24 under § 103(a), section 2143.03 of the M.P.E.P. states that "[t]o establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." Because *Hill et al.* does not teach or suggest several elements of these claims, the Examiner has failed to establish a *prima facie* case of obviousness.

For example, as discussed above, *Hill et al.* does not teach or suggest a stub loader or method where a stub is received from a server and loaded into an execution environment to make the stub code available for use, as recited in claims 1, 11, and 21.

Instead, *Hill et al.* is directed to a method and system for passing pointers to objects between processes. See *Hill et al.,* col. 1, lines 11-14. Accordingly, *Hill et al.* describes sending an interface pointer from a server object in a server process to a client process. To do so, the server process creates an object that has multiple interfaces and identifies an interface to pass to the client process. The server process then creates an object stub, an object interface, and a stub channel corresponding to the interface. The server process directs the stub channel to send an identifier of the interface to the client process. When the client process receives the identifier of the interface, it creates an object proxy, an interface proxy, and a proxy channel. The interface proxy receives requests to invoke function members of the interface and the server's stub channel forwards the request to the appropriate interface stub which

unpacks time parameters and invokes the corresponding method of the packaged

interface. See *Hill et al.,* col. 5, line 60 - col. 6, line 9.

*Hill et al.* does not teach or disclose <u>receiving</u> a stub from the server; instead, a

proxy is <u>created</u> from a dynamic link library that resides on the client system. In *Hill et*

*al.,* it is the client process - not the server process - that originates the object proxy in

response to an interface pointer. For at least these reasons, claims 1, 11, and 21 are

patentable over *Hill et al.*

Claims 4, 14, and 24 depend from independent claims 1, 11, and 21,

respectively, discussed above. Because the reference neither teaches nor suggests

every element of the independent claims, *Hill et al.* does not teach or suggest every

element of the claims that depend therefrom. Therefore, Applicants respectfully request

that the rejections of claims 1, 4, 11, 14, 21, and 24 be withdrawn.

The Examiner rejected claims 31-33 under 35 U.S.C. § 103(a) as being

unpatentable over the Betz reference in view of *Hill et al.* These rejections, however,

suffer from the same problems discussed above with respect to claims 1, 4, 11, 14, 21,

and 24 because the cited references fail to teach or suggest receiving a stub from said

server as recited in claims 31-33.

Claims 31-33 recite "a stub loader module configured to control said computer to,

after said stub is received from said server in response to said stub retrieval module,

load said stub into said execution environment, thereby to make the stub available for

use in said remote invocation of said remote method." Thus, claims 31-33 recite

retrieving a stub "from said server" associated with the remote method to facilitate the remote invocation of the remote method.

The Betz reference describes a number of distributed object-oriented computing systems. However, as admitted by the Examiner, the Betz reference does not teach retrieving a stub from a server associated with the processing of a remote method (Office Action, April 25, 2001, at page 4). Furthermore, *Hill et al.*, as described above, also does not provide such a teaching or suggestion. Accordingly, no reasonable combination of the Betz reference and *Hill et al.* teaches or suggests "a stub loader module configured to control said computer to, when said stub is received from said server in response to said stub retrieval module, load said stub into said execution environment," as recited by claims 31-33. Thus, claims 31-33 are patentable over the cited references.

The Examiner also rejected claims 3, 7-10, 13, 17-20, 23, and 27-30 under 35 U.S.C. § 103(a) as being unpatentable over *Hill et al.* in view of the Birrell reference. All of the claims in this group are dependent claims that depend from independent claims previously discussed. Thus, these claims are patentable at least because of their dependence on allowable independent claims.

Finally, the Examiner rejected claims 2, 5, 6, 12, 15, 16, 22, 25, and 26 under 35 U.S.C. § 103(a) as being unpatentable over *Hill et al.* in view of the Mitchell reference. All of these claims are dependent claims that depend on independent claims previously discussed. Thus, these claims are patentable at least because of their dependence on allowable independent claims.

In view of the foregoing remarks, Applicants submit that the claimed invention is not rendered obvious in view of the prior art references cited against this application. Applicants therefore request the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER, L.L.P.

Dated: February 6, 2003
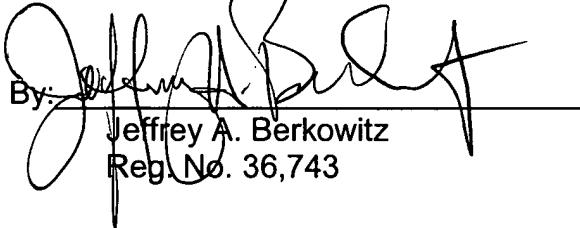
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